



Partnering in Innovation

Making a difference in the lives
of those living with SCI



PRAXIS

Spinal Cord Institute
Institut de la moelle épinière

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Praxis Land Acknowledgement

Praxis Spinal Cord Institute acknowledges that the land on which we are located is on the unceded traditional territory of the Coast Salish Peoples, specifically the shared traditional territories of the Skwxwú7mesh (Squamish), səlil'ilwəta? (Tsleil-Waututh, and xʷməθkʷəy̓əm (Musqueam) First Nations.



Message from our Leadership

PARTNERSHIP DRIVES THEORY INTO PRACTICE AND KNOWLEDGE INTO ACTION

Instead of working in isolation, our unique Praxis model builds on partnership and collaboration that together help us achieve more and build on excellence.

This year's Annual Report celebrates partnership. We're highlighting the role that partnering plays in activating the unique Praxis model. In collaboration, we're driving theory into practice and knowledge into action—reaching higher levels together that are greater than the sum of individual endeavours.

Partnering drives priorities. Including people living with spinal cord injury (SCI) in decision-making prioritizes the projects and research that will indeed make a difference to quality of life in the community. Partnering drives innovation; our Commercialization program cohort companies work closely with mentors, gaining insight on innovation practicality from people with lived experience (PLEX).

Partnering activates, empowers, builds community. Through generous donations of time and expertise, volunteers from within the SCI community sharing personal perspectives help to educate and empower peers, and shape the work done by Praxis. Knowing that Praxis is highly engaged in the Canadian SCI community drives personal donations that continue making a difference in quality of life in the community.

Partnering multiplies. Multi-centre collaborative efforts for data collection and dissemination of best practices helps accelerate bench-to-bedside innovation, care and diagnostics. Early funding

of the research leaders of today brings in bigger grants that close the timeframe on the research of tomorrow. The breadth of projects supported demonstrates Praxis' multifaceted impact within the SCI landscape across Canada, as a significant catalyst and contributor. More hands, more eyes, more brains drive research forwards collectively for more rapid success.

Without support, our vision and work would not be possible. In addition to thanking our volunteers and personal donors in and around the SCI community, we acknowledge the generous financial support from the Government of Canada through Pacific Economic Development Canada (formerly Western Economic Diversification), the Province of British Columbia and Genome BC.

We're also grateful for the generosity and professionalism shown by our professional partner networks, the exemplary leadership of our dedicated Board of Directors, and the Praxis team. Each guide our vision and implement our work, driving theory into practice and knowledge into action. From the strength of these partnerships, Praxis continues to transform the lives of people with SCI.



Bill Barrable
Chief Executive Officer



Dr. Ian Rigby
Chair, Board of Directors



Our Vision

A world without paralysis after spinal cord injury.

Our Mission

To lead collaboration across the global SCI community by providing resources, infrastructure and knowledge. Also, to identify, develop, validate and accelerate the translation of evidence and best practices to reduce the incidence and severity of paralysis after spinal cord injury, reduce long-term costs and improve health care outcomes and the quality of life for those living with spinal cord injury.

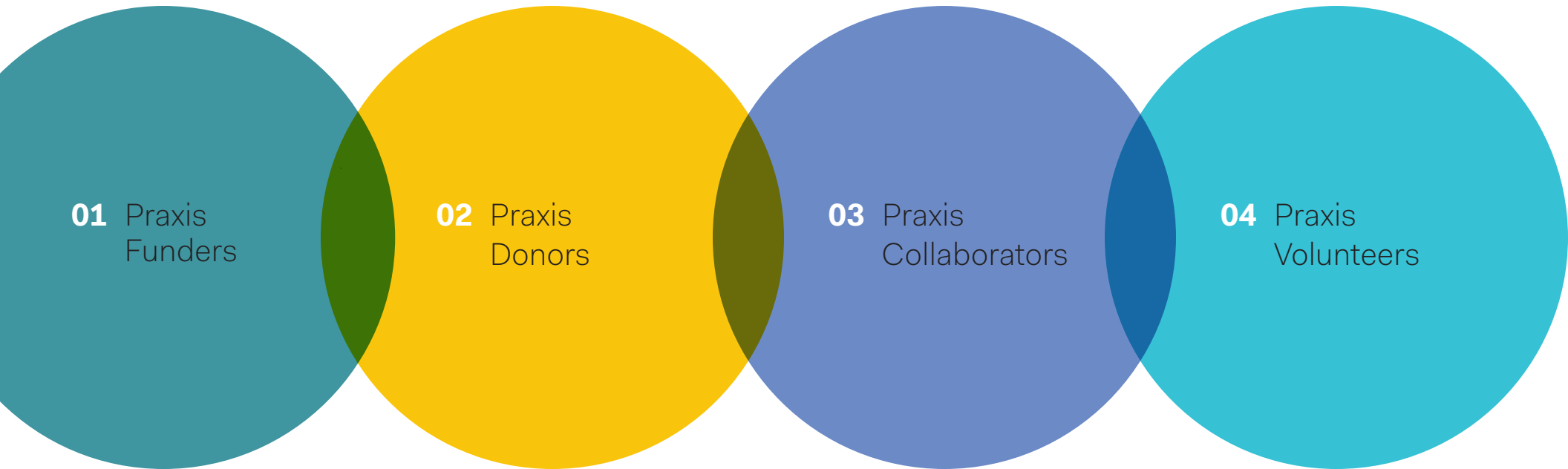
Our Values

- Teamwork
- Global Collaboration and Partnerships
- Innovation for Impact
- Integrity and Trust
- Exceptional Outcomes



Making a Difference – Partnering in Innovation

Instead of working in isolation, our unique Praxis model builds on partnership and collaboration that together synergize to achieve more and build on excellence.

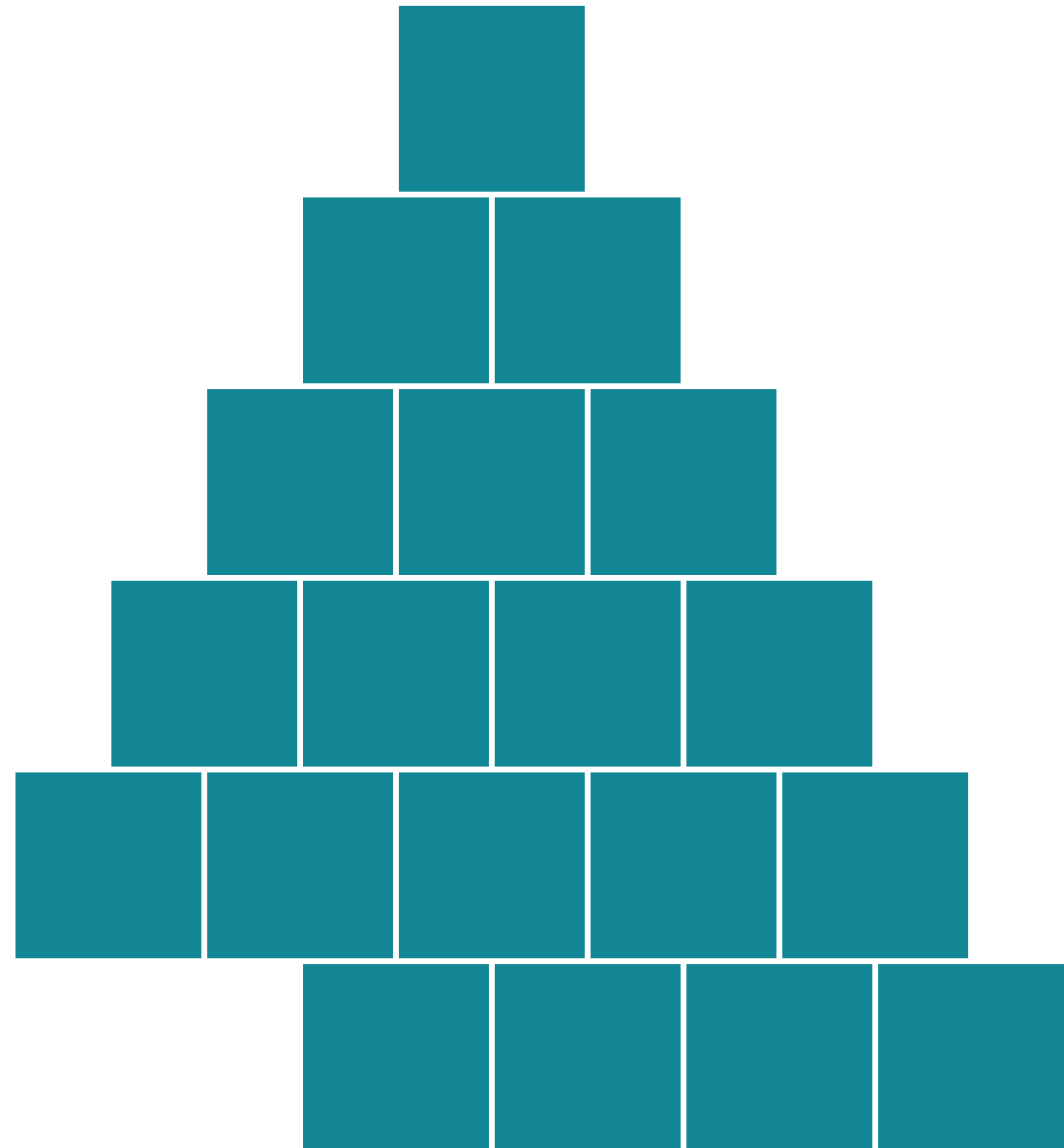


Praxis Funders

Partnering with the Leaders of Today

Funding makes a difference, accelerating innovation towards practical solutions that improve quality of life for people living with spinal cord injury. Partnering with funders helps Praxis invest in today's research to accelerate tomorrow's innovation and cure.

Early Praxis funding to the research leaders of today is foundational. It attracts further funding that shortens the timeframe on the research of tomorrow, moving innovations from bench to bedside. Research covers digital resource and plain language summaries, an internationally accessible spinal cord injury biobank, and exploration of spinal cord stimulation in conjunction with exoskeleton training as therapy. The breadth of projects supported demonstrates Praxis' multifaceted impact within the spinal cord injury landscape across Canada, as a significant catalyst and contributor.



Dr. Brian Kwon

Dr. Brian Kwon, a University of British Columbia Professor of Orthopaedics, Spine Surgeon, and ICORD Associate Director, established the International Spinal Cord Injury Biobank (ISCIB) in 2019. His goal was to create a formal biobank to share valuable human spinal cord injury materials with other scientists and accelerate therapeutic progress in the field. Today, ISCIB holds thousands of samples from patients, all of which are available to SCI researchers internationally.

As Canada's globally-accessible and international spinal cord injury biobank, researchers can access tissues and biological fluids for biomarkers to the various biological mechanisms at work in different types of injuries. These could guide clinicians to best treatment, customizing per injury and per patient.

Early Praxis support of surgeon-scientist Dr. Brian Kwon and his team at UBC enabled research on personalized blood flow management. This work led to a next generation near-infrared spectroscopy (NIRS) sensor, which is heading for commercialization in a partnership grant with the [Michael Smith Foundation for Health Research](#). The NIRS biosensor technology is part of a \$48M US [Defense Advanced Research Project Agency grant](#) to revolutionize SCI treatments using innovative, implantable technologies.

Funding Impacts

“During my time teaching physical medicine and rehabilitation residents and physical therapy graduate students, I routinely recommended the SCIRE Project website and chapters as a credible source of the latest evidence in SCI medicine and rehabilitation.”

Daniel P. Lammertse, MD, SCI Medicine, Craig Hospital, Clinical Professor of PM&R, University of Colorado Denver

“I felt no negative neurological effects from the stimulation, other than a slight short-term increase in spastic muscle tone and some minimal discomfort at the electrode sites. The positive effects were substantial; with an increase in strength and endurance, particularly in gross motor function, over a much longer time period with reduced fatigue and enhanced recovery. In fact, my overall energy levels and quality of sleep were considerably improved throughout the duration of the intervention phase of the study.”

John Chernesky, Consumer Engagement Program Manager at Praxis, who participated in a non-invasive spinal cord stimulation study for spinal cord injury with Dr. Krassioukov, Primary Investigator.

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Dr. Brian Kwon

Dr. Janice Eng

A professor in the Department of Physical Therapy at the University of British Columbia and a Principal Investigator with ICORD (International Collaboration on Repair Discoveries), Dr. Janice Eng oversees the SCIRE (Spinal Cord Injury Research Evidence) Project and its resources as lead investigator.

SCIRE Professional is an international knowledge translation project that provides free online resources for health professionals. The website provides systematic reviews of spinal cord injury research, allowing researchers and health professionals to guide their practice using the latest research findings. Supported by Praxis and the Province of British Columbia, funding helps ensure the content is up to date, relevant, and useful. Analytics show 113k sessions over last year, with 12.3k article downloads and 242k page views. (source: SCIRE Annual Report)

The success of SCIRE Professional has led to the establishment of **SCIRE Community** as a companion site for the spinal cord injury community. Plain language summaries give best practice information for post-spinal cord injury care and tools for self-management. When COVID 19 hit and the public health announcements kept people socially distanced, people living with spinal cord injury and those who cared for them were badly affected. SCIRE Project developed a **range of COVID-specific materials** for professionals and community members alike.

The Canadian Spinal Cord Injury Best Practice (Can-SCIP) Guideline covers care for adults with spinal cord injury from injury to life in the community. As part of the steering committee, Eng and the SCIRE team will support and update the guidelines over the next 2-3 years.

Dr. Andrei Krassioukov

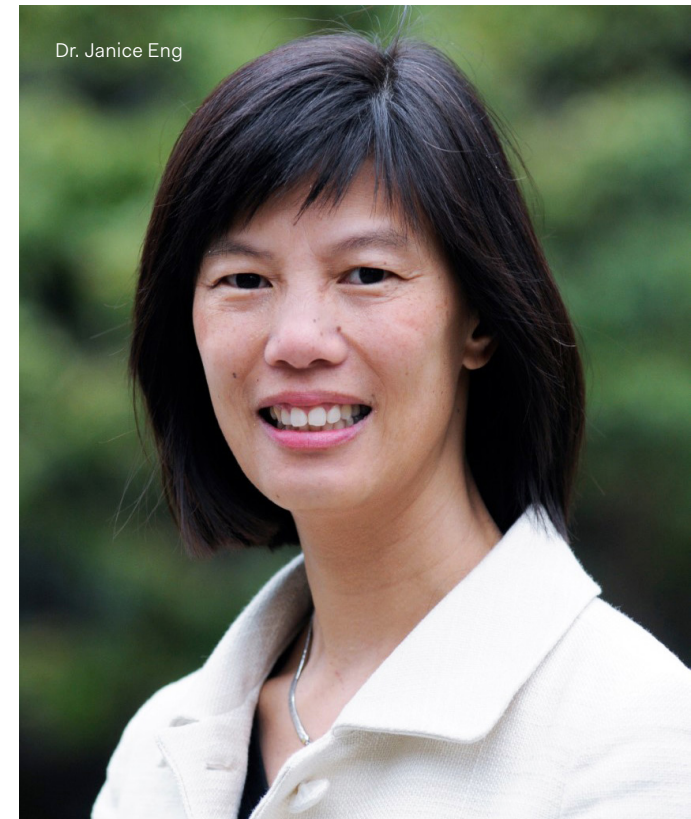
Dr. Andrei Krassioukov, a clinician-researcher with University of British Columbia, ICORD and GF Strong, combines spinal cord stimulation with exoskeleton training to reawaken dormant spinal circuits. He's been awarded one of three \$50K Canadian Spinal Cord Stimulation Team Planning Grants by Praxis for his project, "Non-invasive Neuroprosthesis for Autonomic Recovery After Spinal Cord injury." With the support of this grant, Dr. Krassioukov applied successfully for a major **US Department of Defense award**.

Ongoing research shows that non-invasive spinal cord stimulation therapy re-awakens dormant spinal circuits. Studies have found that this improves grasp, autonomic function, bladder and sexual health among others, all of which impact daily life. Praxis funding supports the advancement of this leading-edge therapy for neuro-restoration in spinal cord injury.

As a participant in a study of non-invasive therapy for spinal cord injury, Praxis Consumer Engagement Program Manager, John Chernesky experienced substantial positive effects from spinal cord stimulation.

Studies also show that combining spinal cord stimulation with activity-based therapy (ABT), which uses intensive and repetitive, task-specific movement, may work even better. ABT using a robotic exoskeleton can change the strength of signals from the brain, leading to improvements in standing and seated balance as well as in other areas such as cardiovascular, urinary tract, bowel and sexual health. Combining these two high intensity methods could maximize recovery and substantially improve health-related quality of life for individuals with spinal cord injury.

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Praxis Donors

Donor Story

“It’s a privilege for me to be able to support an organization like Praxis not only with my time but through donation. Praxis is committed to building awareness globally, collaborating with people with spinal cord injury, researchers, doctors, bringing all of these different groups together, building awareness in our communities.”

Sandra Mulder

Following living with a traumatic SCI, Sandra Mulder became one of the first two participants in the E-Stand clinical trial. This clinical trial investigated epidural spinal cord stimulation to restore volitional movement in patients with complete motor spinal cord injury and paraplegia. Traveling to and from Minnesota for two years from her home in Ontario, Sandra discovered that spinal cord stimulation made a huge difference to her daily life. She is now off all medications, including those for pain relief, and spends much less time on bowel and bladder management.



Awareness is key! I can't do this as an individual but I can support an organization that does.

Sharing her Experience

In 2019, Sandra was invited to be part of a panel session on spinal cord stimulation (SCS) for the ASIA (American Spinal Injury Association) conference, to share her experience of SCS and how it had impacted her life. While at the conference, she was introduced to John Chernesky, Consumer Engagement Program Manager, and learned about Praxis.

"It's important for us all to share these experiences with the community. It helps by spreading awareness of this treatment and how well it's working for me," says Sandra. "Another important factor was that there were clinicians in the audience; I wanted to spark their interest in SCS."

When John invited her to be part of a Praxis panel to share her SCS journey, Sandra didn't hesitate. In addition to donating her time, Sandra also made a personal donation to support the work. She repeated this in October, 2021 along with her family when her older brother, Glen passed away. In lieu of flowers, Sandra and her sister-in-law asked people to donate to Praxis in her brother's name.

"My brother's wife simply said, 'he would have wanted this,'" says Sandra. "My brother was a big supporter of me after my injury. He firmly believed that there would be a cure for spinal cord stimulation one day."

The in memorium page set up by Praxis raised over \$2,500.

Impact

"There are a lot of organizations we can give to but Praxis collaborates with the spinal cord injury community itself – with doctors and government, and also with a strong consumer engagement approach. There's definitely heart here, to help people and work alongside the SCI community. I loved the fact that this was a Canadian organization and that they were looking to make a difference for people living with SCI in my own country."



Praxis Collaborators

Collaboration Story

Quality of care after a catastrophic life-changing event like a spinal cord injury often depends on where you get treatment. Best practices in operation at centres of excellence offer improved health outcomes in both the acute clinical management and in the rehabilitation phase back in the home. However, variations in care exist across Canada and successful recovery and ensuing quality of life depend heavily on where people live and where they receive care. Inequity markedly impacts quality of life after injury.

Strength In Partnership

Praxis is proud to drive consistency and excellence in care through partnership. We support gathering, sharing and analyzing diagnostic data and evidence-driven clinical best practices from partner sites within the SCI clinical community. This will establish optimal diagnostic and care standards.

The Praxis-led [Canadian SCI Registry](#) launched in 2004 as the first nation-wide spinal cord injury patient registry within Canada

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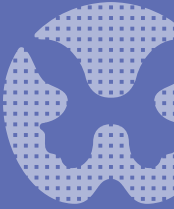
Praxis is proud to drive consistency and excellence in care through partnership.

As a research program, registry sites capture data from the pre-hospital, acute and rehabilitation phases of care, and participants are followed in the community at regular intervals post-injury. Data generated and captured at these sites fuel research studies into spinal cord injury diagnosis, treatment and rehab care.

In addition to supporting data collection and sharing, Praxis also partners with other organizations that seek to **implement best practices** equitably across Canada. Partnering with organizations including The SCI Implementation and Evaluation Quality Care Consortium (SCI-IEQCC), Accreditation Canada and the Health Standards Organization (HSO) seeks to further improve the quality and integration of spinal cord injury rehabilitation programs across the care continuum across the care continuum. Data collection, best practices implementation and accreditation at registry sites further supports the partnerships.

With HSO, Praxis helped develop the first comprehensive acute and rehabilitation spinal cord injury standards. These evidence-informed tools support health system improvements to reduce variations in care so Canadians can have equitable access to quality care regardless of where they live. To date, 17 acute and rehabilitation hospitals across Canada have successfully fulfilled the SCI Standards using the Qmentum Accreditation Program, with the majority also being Praxis SCI Registry sites.

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Partnering and engagement put British Columbia and Canada on the map for excellence in spinal cord injury care.

Partnering with Accreditation Canada affiliate, HSO, Praxis identifies potential gaps in current SCI standards. A patient experience map, co-designed by people with spinal cord injury, informs opportunities to improve care; the *Integrated People-Centred Spinal Cord Injury Rehabilitation Rehabilitation Program report* has just been through public review. Feedback gained will revise the standard, and help to improve the quality and integration of spinal cord injury rehabilitation programs across the care continuum. The standard focuses on how a comprehensive, continuous, and integrated rehabilitation program can meet the needs of the spinal cord injury community.

The SCI Implementation and Evaluation Quality Care Consortium (SCI-IEQCC) is a quality improvement initiative aimed at implementing indicators and building capacity in implementation science to help optimize rehabilitation care. Praxis funding expanded the network beyond Ontario to promote better care for individuals with a spinal cord injury nationwide. 'Being part of IEQCC will enable sites to meet these standards.'

Leadership from BC and Canada

To date, the Praxis-led Canadian SCI Registry includes 30 major trauma and rehabilitation centres across Canada plus international collaborations with hospitals in New Zealand and Israel. It includes more than 9,000 participants making it the largest database that tracks the experiences of people living with spinal cord injury in Canada from the moment they sustain their injury and throughout their lifetime. Registry data support studies, including examining the use of imaging as a biomarker to inform clinical assessment and understand outcomes for those living with spinal cord injury.

More than half of the Registry sites also participate in the Praxis-supported SCI Standards program.

Implementing data gathering from centres of excellence, sharing best practices through accreditation and learning from people with lived experience of SCI puts British Columbia and Canada on the map for excellence in spinal cord injury care.

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Praxis Volunteers

Sharing Experiences

In Vancouver BC, 2016, Jen French, Founder and Executive Director of **Neurotech Network**, took part in one of the first Praxis meetings of multiple stakeholders in the SCI community. Alongside others with lived experience, she was shocked to find that the researchers, innovators and clinicians seemed to have little idea of what life was actually like when living with a spinal cord injury.

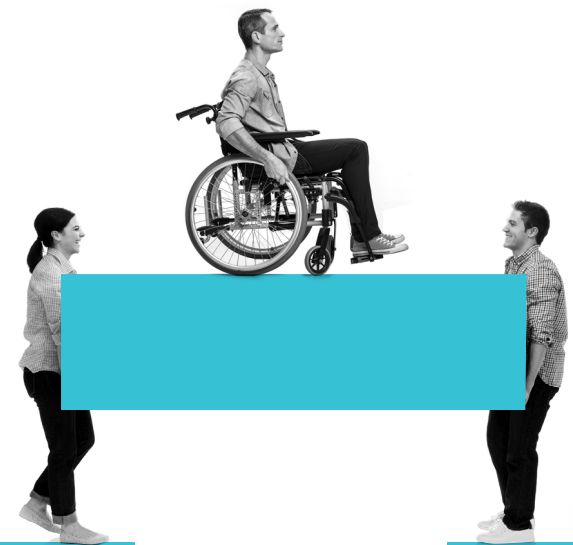
Jen, herself with over 24 years of lived experience with SCI, was perplexed that care and cure strategies rarely consulted with people with lived experience for better clinical treatment and more meaningful innovation. With a long association in SCI advocacy and as a neurotech pioneer, Jen also realized that in order to activate engagement with people with lived experience, advocacy was needed.

Activating Advocacy

From the 2016 meeting, Jen and others helped establish the **North American Spinal Cord Injury Consortium (NASCI)** to promote best practices of consumer engagement in research, care, cure, and policy, and the creation of a unified platform for SCI advocacy in North America.

As a volunteer with Praxis, Jen has presented the keynote for an **Ideation Clinic** session, where entrepreneurs and innovators address the early stage barriers to health innovation by brainstorming today's ideas for tomorrow's healthcare success.

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If we don't help with the translation pathway it will never get to the end user.

“From a spinal cord injury perspective, this becomes very important because there's a lot of research and a lot of great things coming out in published papers, but we don't see anything new on the care side.”

She's also given her time, experience and insight most recently as a judge for the [Praxis SCI Incubate Program Demo Day](#), held in February 2022. As Incubate companies presented, Jen joined fellow judges, Alex Arevalos, CEO and Cofounder of Starling Medical and member of the SCI Incubate 2020 cohort and Richard Toselli, President, CEO and Chief Medical Officer of InVivo Therapeutics.

During the Demo Day, Jen offered feedback on not only commercialization process and design refinement to speed the success of 'bench to bedside' but also provided perspective from a lived experience. Without consumer engagement and feedback, entrepreneurs may not understand how to optimize prototype innovation to positively impact the ability to thrive.

We knew we needed to get involved

Volunteering takes time, energy and commitment, but to Jen there's an important mission behind it – change.

“It's great that we're funding a lot of research but if we don't help with the translation pathway—from laboratory to marketplace to the end user—it will never get to the end user,” says Jen.

Volunteering brings people with lived experience of spinal cord injury into a more active role, as contributors rather than passive recipients. And as advisors in the early stages of innovation, there's a real opportunity to impact innovations in care.

“We needed to get involved to move the needle. A published study on its own needs a little nurturing from the community; this is what the patient engagement movement around the world has started.”

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Jen French



Many thanks to all our volunteers for
generously sharing time and experience.



Partner With Us

On Their Feet

Social distancing was no obstacle to the team at HR firm, Robert Half, who ran a virtual fundraiser for Praxis in Spring 2021. Team member, Joe McEgan finished his goal in December 2021 of running 1,000 km for spinal cord injury research, raising \$2/km run for Praxis.

“People give to other larger organizations and never hear back about the benefits. Giving to smaller organization such as Praxis meant we knew where the funds were going.

Setting up the donation page was easy with Praxis, just one phone call and a photo. The link to the online donation was easy to share so that people could click through to the page.

Donating gave us a sense of peace, that yes this was a worthwhile donation.”

Sandra Mulder

Please support the **advancements in quality of life for people with SCI by donating today**. If you'd like to plan a legacy or major gift, please contact our fundraising lead, Andrew Forshner, at aforshner@praxisinstitute.org.

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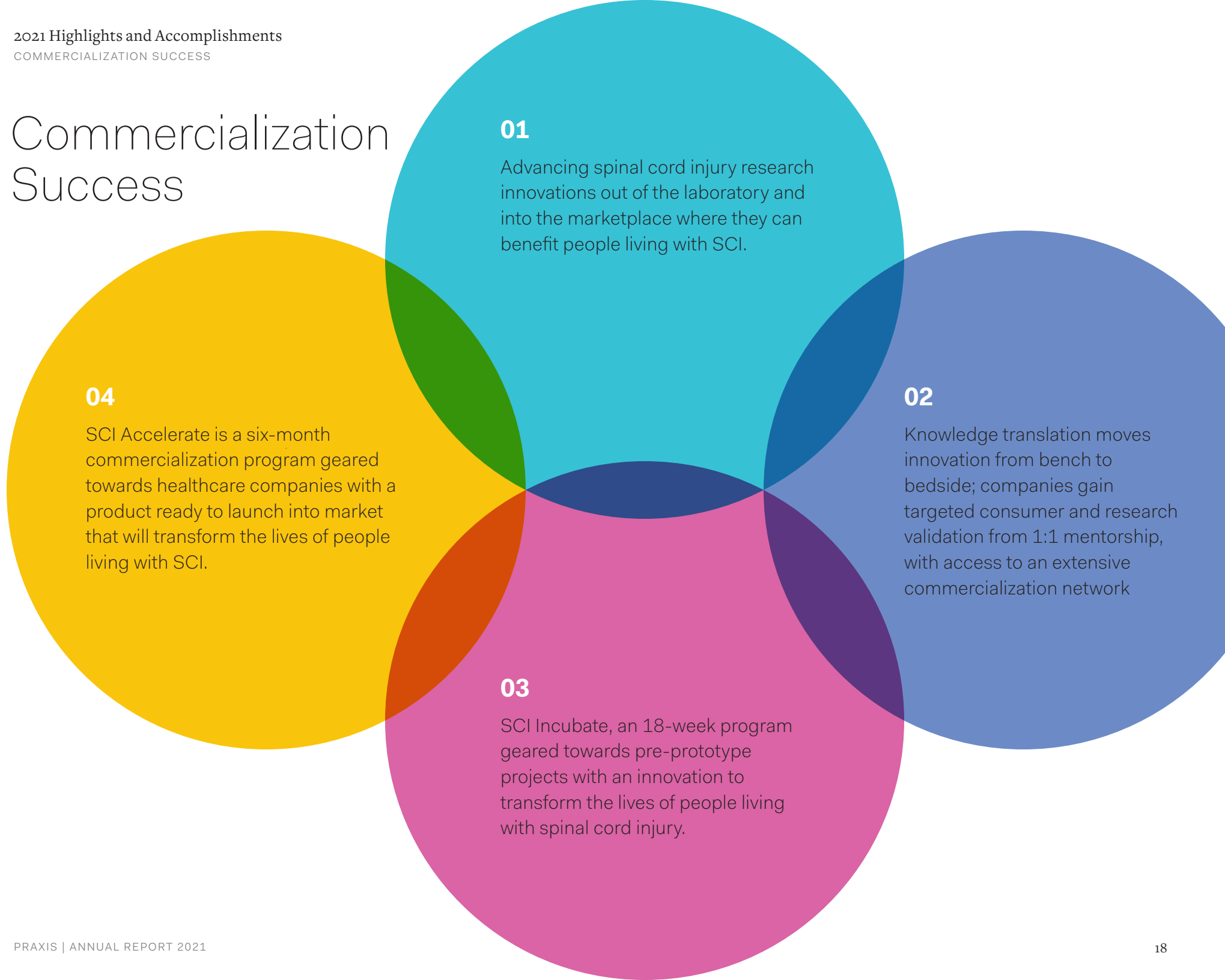


Joe McEgan



Sandra Mulder

Commercialization Success



01

Advancing spinal cord injury research innovations out of the laboratory and into the marketplace where they can benefit people living with SCI.

02

Knowledge translation moves innovation from bench to bedside; companies gain targeted consumer and research validation from 1:1 mentorship, with access to an extensive commercialization network

03

SCI Incubate, an 18-week program geared towards pre-prototype projects with an innovation to transform the lives of people living with spinal cord injury.

04

SCI Accelerate is a six-month commercialization program geared towards healthcare companies with a product ready to launch into market that will transform the lives of people living with SCI.

SCI Accelerate program helps bring products to users: WheelAir

For the SCI Accelerate and SCI Incubate programs, the Praxis Commercialization department mobilizes a network of commercialization partners who provide clinical research expertise, consumer feedback, business strategy mentorship, and regulatory and reimbursement guidance. Focused on supporting the advancement of medical technologies to improve the quality of health for people living with spinal cord injury, these programs prime entrepreneurs for success. Participants learn to evaluate market feasibility, develop and scale up their spinal cord injury-related innovations, identify target markets and refine their investor readiness.

WheelAir, a UK-based company developed a temperature and humidity control system for wheelchairs. As part of the 2021 SCI Accelerate program cohort, they developed a business strategy for North American market entry to give everyone in a wheelchair with an SCI and challenged by temperature regulation access to their technology.

Working with our program's Entrepreneur-In-Residence and regulatory experts, the company's founder, Corien Staels developed a comprehensive plan for market entry.

Impact on Daily Living for people with an SCI

Overheating and excessive sweating can have a significant impact on an individual's ability to carry out their daily activities. Overheating can start with heat discomfort, but quickly progress to skin rashes, spasms, dizziness, nausea and even heat-induced seizures. Moisture, often in combination with heat,

comes with its own set of problems; skin breakdown can eventually lead to pressure sore formation, which can be fatal. All these issues not only require medical attention but are stressful, exhausting and life-limiting.

WheelAir is the first temperature and humidity control system using the power of airflow in wheelchair seating. The technology uses radial fan technology, which is controllable, silent and guided through patented Fluid Flow™ channel technology. By dispersing air evenly across the seat surface, WheelAir helps avoid issues caused by overheating and over-sweating while keeping skin dry and clean. The WheelAir team hears countless stories about how their customers regain more capacity in their daily lives. With the ability to control temperature using the WheelAir system, users can get out to enjoy BBQs with friends, exercise, and travel, without worrying about the life-limiting impacts of overheating and sweat.

Since graduating from the SCI Accelerate program, WheelAir received confirmation from Health Canada that the company can sell their product in Canada. The company is now developing a distribution plan to make their system broadly available for all Canadians.

For individuals using wheelchairs from Dietz Power, partnership with WheelAir expands the access of this life-changing technology; the system can be included as an add-on for all sales.

The Praxis SCI Accelerate program has global impact, advancing consumer access to much-needed spinal cord injury-related medical technology.

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Corien Staels



SCI Accelerate program helps bring products to market: Rehabtronics

Rehabtronics is a BC-based medical start-up whose medical device Prelivia is a unique product that addresses the physiological causes of pressure injuries as a preventative measure for the development of severe, sometimes fatal, pressure ulcers. Praxis has supported the novel technology behind Rehabtronics for over 10 years, starting when it was a research project at the University of Alberta's Neuroscience and Mental Health Institute.

How Prelivia Works

Prelivia uses neurostimulation technology to promote tissue oxygenation and improve local blood circulation, minimizing tissue damage. A care provider applies Prelivia pads onto areas that are at-risk of developing a pressure injury, then activates the wireless device stimulator to deliver intermittent electrical stimulation to the underlying tissues, restoring blood flow and tissue oxygenation with treatment time of 10-15 minutes per area per day

In April 2020, Rehabtronics joined the first cohort of Praxis's inaugural SCI Accelerate program—an intensive program supporting companies with post-prototype medical technology ready to launch into market that will transform the lives of people living with

spinal cord injury (SCI). In addition to providing targeting to consumer and research mentoring, the program offers regulatory, reimbursement and business mentorship support from leaders in the healthcare industry.

Upon entering the program, Rehabtronics had limited funding, clinical validation, or regulatory approval. The Praxis SCI Accelerate program connected Rehabtronics with our network of entrepreneurial, regulatory, reimbursement and clinical mentors to develop a realistic regulatory plan. The SCI Accelerate program helped the team identify the weaknesses in the company, addressing them in their roadmap to future strategy to ensure effective entry into the market.

“The quality of mentors, advisors, and researchers at Praxis is world-class: in just a few short weeks, we gained tremendous value.”

Rahul Samant

Rehabtronics CEO & Founder

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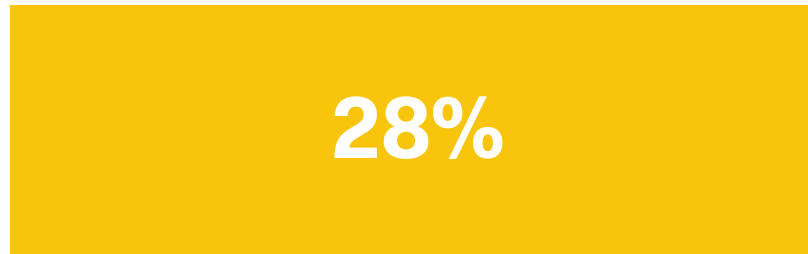
Rahul Samant

Prelevia Study Results

Rehabtronics graduated after working with the program's Entrepreneur-In-Residence to construct an effective fundraising pitch and business strategy that set them up for success. During the program, they received their Investigational Testing Authorization (ITA) from Health Canada, and within nine months after graduating, the U.S. Food and Drug Administration provided 510 (k) Clearance for Prelevia as a Class II medical device. In November 2021, the company raised \$1.6 Million in an oversubscribed seed funding round along with \$1.25 Million from Genome BC (a grant funder of the Praxis Commercialization Program) to fund their upcoming quality improvement trial and a validation pilot (up to 700 patients) at the Cleveland Clinic. Following the completion of these studies and completing Health Canada regulatory approval, Rehabtronics will be able to ship Prelevia across North America.

References:

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Kane, et al, Adv Wound Caref, 6(4):115-124,2017
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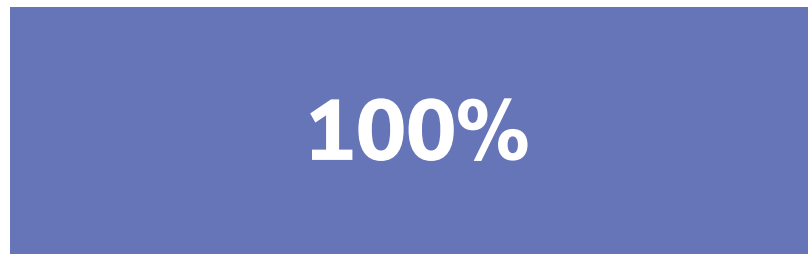
Increase in Tissue Oxygenation¹



Decrease in Injury Damage²



Decrease in Nursing time per shift³



Of Patients responded positively to use⁴

Making a Difference

IN THE LIVES OF THOSE LIVING WITH SPINAL CORD INJURY

Praxis Active Partners

Canadian

Canadian Friends of Hebrew University

India-Canada Centre for Innovative Multidisciplinary Partnerships to Accelerate Community Transformation and Sustainability (IC-Impacts - Canadian-Indian Research Collaborative in SCI Innovations)

The University of British Columbia
– Sauder School of Business
– Faculty of Medicine
– Faculty of Human and Social Development - School of Health and Exercise Sciences

Michael Smith Foundation for Health Research

MARS Discovery District

Human in Motion

ICORD – International Collaboration on Repair Discoveries

Vancouver Coastal Health Authority

Simon Fraser University
– Dept of Gerontology
– Faculty of Engineering

University of Alberta
– Donadeo Innovation Centre for Engineering
– Faculty of Medicine
– Neuromuscular Control & Biomechanics (NCB)-Lab
– Faculty of Nursing

University of Toronto
– Institute of Biomaterials and Biomedical Engineering (IBBME)
– Waakebiness-Bryce Institute for Indigenous Health - Dalla Lana School of Public Health
– Innovations & Partnership Office

Health Standards Organization

Spinal Cord Injury BC

Genome BC

University of Waterloo - Centre for Bioengineering and Biotechnology

McMaster University – Faculty of Health Sciences

Holland Bloorview Kids Rehabilitation Hospital – Pearl Interactives

University of Manitoba – Spinal Cord Research Centre

NeuralDrive

NanoTess

NovaSense

University Health Network

The Governors of the University of Calgary

The Governors of the University of Alberta

Eastern Regional Health Authority

Regional Health Authority B

Centre Intégré Universitaire de Santé et de Services Sociaux (CIUSSS) Nord-de-L'Île-de-Montréal

University of Saskatchewan

Nova Scotia Health Authority

Lawson Research Institute

Hamilton Health Sciences Corporation
– Ottawa Hospital Research Institute
– Unity Health Toronto

– Sunnybrook Research Institute
– Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale (CIUSSS-CN)

– La Corporation de L'Ecole Polytechnique de Montréal

International

Hebrew University of Jerusalem

Indian Spinal Injuries Centre

Indian Institute of Technology, Delhi

SpineX Inc.

WheelAir International B.V.

Abilitech Medical Inc.

Neuro Vigor LLC

International Spinal Cord Society (ISCOS)

Praxis-led Canadian SCI Registry Facilities

GF Strong Rehabilitation Centre

Vancouver General Hospital

Foothills Hospital

Glenrose Rehabilitation Hospital

Royal Alexandra Hospital

University of Alberta Hospital

Royal University Hospital

Saskatoon City Hospital

Winnipeg Health Sciences Centre

Toronto Rehab Institute/Lyndhurst Centre

St. Michael's Hospital

Sunnybrook Health Sciences Centre

Toronto Western Hospital

Hamilton Regional Rehabilitation Centre, HHS

Hamilton General Hospital, HHS

Parkwood Institute

University Hospital, LHSC

Victoria Hospital, LHSC

The Rehabilitation Centre

Ottawa General Hospital

Hôpital de l'Enfant-Jésus

Institut de réadaptation en déficience physique de Québec

Hôpital du Sacré-Coeur de Montréal

l'Institut de réadaptation Gingras-Lindsay-de-Montréal Rehabilitation Institute (IRGLM)

Queen Elizabeth II Health Sciences Centre

Nova Scotia Rehabilitation Centre

L.A. Miller Rehabilitation Centre

Saint John Regional Hospital

Stan Cassidy Centre for Rehabilitation

Our work would not be possible without the significant contribution of individuals living with spinal cord injury.

Also, the projects highlighted in this year's annual report are made possible through the generous support of our funders.

Government of Canada

Canada



Western Economic Diversification Canada

Diversification de l'économie de l'Ouest Canada

Province of British Columbia



Genome British Columbia



Making a Difference

IN THE LIVES OF THOSE LIVING WITH SPINAL CORD INJURY

Donor List

Patrons

\$250,000+

The Estate of Gerd Asche
Mary & Gordon Christopher
Family Foundation

Advocates

\$25,000-\$100,000

Ryan Barrington-Foote
Genome BC

Benefactors

\$2,500 - \$10,000

Jeff Charpentier
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\$500 - \$2,500

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\$250

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Making a Difference

IN THE LIVES OF THOSE LIVING WITH SPINAL CORD INJURY

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Co-Director, Brain and Spinal Injury Center,
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Brigham and Women's Hospital, Harvard
Medical School

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Innovation & Commercialization Expert
Co-Chair, Directors Leading Change

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Advisory Board Member,
The Knowledge Society



Encouraging Collaboration on
a National and Global Scale

100+

Active partners national and internationally

Engaging People with
Lived Experience



20,000+

Individuals with spinal cord injury engaged

1,000+

2022 enrolments in the Praxis-led Canadian SCI Registry

10,170+

Total participants in Praxis-led Canadian SCI Registry

190

Praxis projects with direct engagement of people with lived experience

5

Praxis people with lived experience team members

Improving Spinal Cord Injury Care,
Accelerating Cure-Based Research



30

Participating facilities in Praxis-led Canadian SCI Registry sites across Canada

700+

Clinicians provided with best practice training

5,900+

Canadians with spinal cord injury benefited from the implementation of best practices

50%

Praxis-led Canadian SCI Registry network accredited with Accreditation Canada's Qmentum Standards for Spinal Cord Injury

2,100+

Praxis-led Canadian SCI Registry citations in Google Scholar

150+

Projects funded that are working to improve the lives of people with spinal cord injury

Contributing to Spinal Cord
Injury Research



310+

Peer-reviewed publications supported

Fields of publications: Public Health and Health Services, Clinical Medicine, Information and Communication Technologies, Engineering, Biomedical Research

Country collaborations: Canada, US, Denmark, Australia, United Kingdom, Netherlands

Institutional collaborations: UBC, Toronto, VCH, Western, Dalhousie, Laval, McMaster

Driving Innovation
since 2019



19

SMEs supported
Small-to-medium enterprises supported

15

Total number of prototypes ready for demonstration in an operational environment

7

Number of products, processes, services or technologies to market

36

Entrepreneurs trained since start of accelerator programs

1,776

Total hours of 1:1 mentorship with SMEs

\$700K

Venture grants provided to SMEs to advance innovations in spinal cord injury cure and care

\$17.2M

Dollars leveraged for cure and care technologies by SMEs in non-dilutive funding

MARCH 31, 2022, WITH COMPARATIVE INFORMATION FOR 2021	2022	2021
Assets		
Current assets		
Cash and cash equivalents	\$ 538,556	\$ -
Short-term investments	851,545	2,151,277
Accounts receivable	3,535,266	88,217
Prepaid expenses	63,004	111,096
	4,988,371	2,350,590
Capital assets		
Investment funds	105,143	207,804
	320,188	247,093
	\$ 5,413,702	\$ 2,805,487
Liabilities and Net Assets		
Current liabilities:		
Bank indebtedness	\$ -	\$ 14,851
Accounts payable and accrued liabilities	319,966	663,709
Deferred contributions	3,895,908	1,378,119
	4,215,874	2,056,679
Net assets:		
Unrestricted funds	1,197,828	748,808
	\$ 5,413,702	\$ 2,805,487

Praxis Spinal Cord Institute

STATEMENT OF OPERATIONS AND FUND BALANCES

YEAR ENDED MARCH 31, 2022, WITH COMPARATIVE INFORMATION FOR 2021	2022	2021
Revenue		
Grants and contributions	\$ 7,272,200	\$ 10,455,680
Donations and sponsorships	559,388	4,779
Investment income	28,367	98,486
Other income	258,494	208,835
	8,118,449	10,767,780
Expenses		
Translational research	2,016,330	3,747,964
Best practice implementation	2,575,889	2,613,109
Commercialization	852,641	1,588,824
Informatics	1,193,906	1,145,274
Network development	-	305,395
Consumer engagement	439,011	485,215
Fundraising	104,409	28,215
Management and administration	487,243	815,986
	7,669,429	10,729,982
Excess of revenue over expenses	449,020	37,798
Unrestricted fund balance, beginning of year	748,808	711,010
Unrestricted fund balance, end of year	\$ 1,197,828	\$ 748,808

Contact Information

For Praxis Spinal Cord Institute's complete audited financial statements, please visit our website: praxisinstitute.org

Praxis Spinal Cord Institute

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